

R E M A R K S

Reconsideration of the application in view of the following remarks is respectfully requested. No claims have been amended, canceled or added. Therefore, claims 1-34 are pending in the application.

Information Disclosure Statement

Applicant has submitted another Supplemental Information Disclosure Statement (IDS) for this application herewith. Therefore, Applicant respectfully requests the Examiner to consider the listed references and to provide an initialed and signed copy of the Form PTO-1449 with the next paper in this application.

Claim Rejections under 35 U.S.C. § 102

The Examiner rejected claims 1-5, 7-12, 15-19, 21-26 and 31-34 under 35 U.S.C. § 102(e) as being anticipated by U.S. Patent Application Publication No. 2002/0075542 A1 to Kumar et al. ("Kumar et al."). Applicant respectfully traverses these rejections.

Because the December 17, 2001 filing date of Kumar et al. is after the April 16, 2001 filing date of Applicant's application, the Examiner's rejections rely on Kumar et al.'s apparent benefit claims under 35 U.S.C. 119(e) to prior U.S. provisional application no. 60/256,540, filed December 18, 2000 ("the '540 provisional application"), and prior U.S. provisional application no. 60/276,610, filed March 16, 2001 ("the '610 provisional application").

In order for the Examiner's rejections to be valid, the '540 and '610 provisional applications *themselves* must properly support the subject matter used to make the

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rejections. This rule is indicated in section 706.02(f)(1) of the Manual of Patent Examining Procedure (MPEP), which states in part:

I. DETERMINE THE APPROPRIATE 35 U.S.C. 102(e) FOR EACH POTENTIAL REFERENCE BY FOLLOWING THE GUIDELINES, EXAMPLES, AND FLOW CHARTS SET FORTH BELOW:

• • • • •  
(B) Determine if the potential reference resulted from, or claimed the benefit of, an international application. If the reference does, go to step (C) below. The 35 U.S.C. 102(e) date of a reference that did not result from, nor claimed the benefit of, an international application is its earliest effective U.S. filing date, taking into consideration any proper benefit claims to prior U.S. applications under 35 U.S.C. 119(e) or 120 if the prior application(s) properly supports the subject matter used to make the rejection. See MPEP §§ 706.02(a).

MPEP § 706.02(f)(1) Examination Guidelines for Applying References Under 35 U.S.C. 102(e) (emphasis added).

Therefore, Applicant submits that the Examiner must show how the '540 and '610 provisional applications themselves anticipate Applicant's claims, or else the rejections must be withdrawn. The Examiner cannot rely on the disclosure of Kumar et al. (Pub. No. 2002/0075542 A1) because that document was filed after Applicant's application. Applicant has obtained copies of the '540 and '610 provisional applications and submitted them with the Supplemental Information Disclosure Statement (IDS) mentioned above and included herewith.

Applicant submits that the rejections based on Kumar et al. must be withdrawn because the '540 and '610 provisional applications do not properly support the subject matter used to make the rejections. For example, in rejecting Applicant's independent claims the Examiner relies heavily on Kumar et

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al.'s paragraphs [0050], [0053], [0054] and [0088]. These paragraphs describe Kumar et al.'s multi-medium interface 800 and the media abstraction unit 850 shown in their FIG. 8. Applicant is unable to find a figure in the '540 and '610 provisional applications that illustrates the multi-medium interface 800 having the media abstraction unit 850, free-space optics unit 830, RF wireless unit 840 and optical transceiver 820. Furthermore, Applicant is unable to find any mention of a media abstraction unit in the '540 and '610 provisional applications.

Applicant submits that the '540 and '610 provisional applications do not anticipate Applicant's independent claims. Specifically, Applicant's independent claim 1 recites in part:

"monitoring one or more environmental conditions in a vicinity of at least one of the one or more free-space optical links;

. . . . .

routing the network data traffic through an alternate communication path in response to data obtained from the step of monitoring one or more environmental conditions in a vicinity of at least one of the one or more free-space optical links."

(Applicant's independent claim 1).

Applicant's independent claims 3, 5, 7, 10, 23 and 25 include the same or similar language.

Applicant has not found a teaching or disclosure of Applicant's above-quoted claim limitations in the '540 or '610 provisional applications. Specifically, the '540 provisional application does not disclose Applicant's recited "monitoring" step because the '540 provisional application does not appear to disclose the direct monitoring of actual environmental conditions in the vicinity of a free-space optical link. In this regard, Applicant stated the following in his

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specification:

"In general, the free-space optical network management system 102 automatically collects weather data and manages the free-space optical communication network 100 depending on current weather conditions. The management system 102 preferably uses the measurements of actual atmospheric and environmental conditions in the area of deployment in an automatic feedback and control system to manage the free-space optical network 100. This technique allows for taking microclimate effects into account. The management system 102 significantly increases the overall network 100 availability by using alternate or redundant routing paths 110 in case of a potential system loss due to environmental conditions. This improves the predictability of the availability of the network 100."

(Applicant's specification, page 6, lines 14-24)  
(emphasis added).

In contrast to the direct monitoring of actual environmental conditions, the '540 provisional application mentions adaptive power control, adaptive modulation, adaptive forward error correction, and ARQ. For example, the '540 provisional application states:

"2. Adaptive Link Quality Management  
As the wireless medium is subject to noise, interference and weather conditions as described in the background of invention, our invention consists of several mechanisms to maintain the bit error rate of wireless link connecting any two nodes:

- a) Adaptive power control . . . . .
- b) Adaptive modulation . . . . .
- c) Adaptive forward error correction . . . . .
- d) ARQ . . . . "

('540 provisional application, page 14, line 6 to page 15, line 1).

"Clearly, design of high bandwidth, spectrally efficient wireless network at millimeter wave need an alternative approach to combat rain attenuation and interference. The optimum approach is to design completely adaptive systems adaptive to traffic, interference and weather conditions. The adaptive system can be combined with advanced communication techniques to design an optimal solution to meet the needs of propagation challenges in the millimeter wave. The techniques used by RedWave Networks are specific to millimeter wave environment and are as follows:

1. Close loop power control
2. Adaptive QAM
3. Adaptive forward error correction"

('540 provisional application, page 16, lines 1-10).

In fact, Applicant discussed the complications with such approaches in his specification. Namely, Applicant stated:

"In order to manage a free-space optical network in a manner that avoids the adverse consequences of inclement weather and other difficult atmospheric conditions, there is needed a way to detect that atmospheric conditions have deteriorated to the point where the transmitted beams might be adversely affected. One way to detect such deterioration is to measure the received signal power at one end of a free-space link in order to determine whether or not there is any path attenuation. One complication with this approach, however, is that it is difficult to determine whether or not any decrease in receive power is due to weather conditions or due to an alignment problem or due to another possible failure of the system that might not be related to weather impact. For example, an alignment problem with one of the free-space transceivers can also reduce the received power."

(Applicant's specification, page 4, line 30 to page 5, line 11) (emphasis added).

In order to overcome such complications Applicant chose to use the direct monitoring of one or more environmental conditions in a vicinity of at least one of the one or more free-space

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optical links, as is recited in Applicant's claims. Applicant has not found a disclosure of this in either the '540 or '610 provisional applications.

Applicant also submits that the '540 and '610 provisional applications also do not disclose or teach the "routing" step recited in Applicant's claims. For example, the '540 provisional application states:

"b) Self-healing architecture providing high reliability of connectivity

RedWave's Smart Protection Switching (SPS) enables self-healing resilient capability of Wireless Dual Ring. When the wireless link between any two nodes fail (e.g. equipment failure or blocking by physical objects), traffic along the failed link will be redirected along the remaining part of the ring, providing fast restoration of connectivity. Restoration occurs at Layer 2 within 50 milliseconds."

('540 provisional application, page 13, lines 1-8).

"d) Network routing and reconfiguration - When a particular link fails or degrades, such information will also be provided to the routing protocol to perform traffic engineering or rerouting. In addition, the above link information is used to load balancing of traffic on the dual rings.

QoS schemes defined here are not limited to Wireless links and are applicable to Wired (Optical Fiber/Copper links) as well as other Wireless links (Air Fiber links)."

('540 provisional application, page 18, lines 1-7).

This language simply does not disclose that the traffic engineering or rerouting or redirecting is performed "in response to data obtained from the step of monitoring one or more environmental conditions in a vicinity of at least one of the one or more free-space optical links", as is recited in Applicant's claims. Such rerouting or redirecting in the '540

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provisional application is not performed in response to the direct monitoring of actual environmental conditions.

Instead, this language in the '540 provisional application indicates that such rerouting or redirecting is performed after an actual failure. This is a simple redundant failover whereby the rerouting or redirecting takes place after a failure of a primary connection has already occurred. The process is therefore more "retro-active". In contrast, Applicant's active monitoring of the environmental conditions provides a "pro-active" switching mechanism whereby the switching can take place before the actual connection fails. This is a more sophisticated process and is a fundamental difference from the '540 provisional application because Applicant's mechanism allows for a "seamless" switching process that is not associated with a "temporary" total loss of the connection before the failover takes place.

With respect to Applicant's independent claim 15, Applicant similarly submits that the "monitoring", "attempting to adjust" and "routing" steps recited in that claim are also not anticipated by the '540 and '610 provisional applications.

Therefore, Applicant submits that the rejections of Applicant's independent claims 1, 3, 5, 7, 10, 15, 23 and 25 based on Kumar et al. must be withdrawn. Furthermore, Applicant submits that the rejections of Applicant's dependent claims 2, 4, 8-9, 11-12, 16-19, 21-22, 24, 26 and 31-34 based on Kumar et al. must also be withdrawn for at least these same reasons due to their dependency on their respective independent claims.

Applicant's selection of the above-quoted portions of the '540 provisional application should not be construed as an assertion that there is no other language in either of the provisional applications that the Examiner may find more

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relevant. Applicant requests and encourages the Examiner to review the entirety of both the '540 and '610 provisional applications for disclosure and teachings that the Examiner may believe is relevant.

Claim Rejections under 35 U.S.C. § 103

Kumar et al.

The Examiner rejected claims 6 and 20 under 35 U.S.C. § 103(a) as being unpatentable over Kumar et al. Applicant respectfully traverses these rejections.

Applicant submits that the rejection of Applicant's independent claim 6 must be withdrawn for the same reasons discussed above. Namely, Applicant submits that the '540 and '610 provisional applications do not properly support the subject matter used to make the rejections based on Kumar et al.

Applicant submits that the rejection of Applicant's dependent claim 20 must also be withdrawn for at least the same reasons discussed above with respect to independent claim 15 due to its dependency thereon.

Kumar et al. in view of Bae

The Examiner rejected claims 13, 14 and 27-30 under 35 U.S.C. § 103(a) as being unpatentable over Kumar et al. in view of U.S. Patent No. 5,790,286 to Bae ("Bae"). Applicant respectfully traverses these rejections.

Applicant submits that the rejection of Applicant's independent claims 13, 27 and 29 must be withdrawn for the same reasons discussed above, namely, the '540 and '610 provisional applications do not properly support the subject matter used to make the rejections based on Kumar et al. And Applicant submits that the rejection of Applicant's dependent claims 14, 28 and 30 must also be withdrawn for at least these

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same reasons.

With respect to independent claim 29, this is now the third time the Examiner has disregarded limitations of this claim and entered a rejection. Specifically, the Examiner has simply not identified where any of the cited references disclose the step of "re-evaluating the alternate communication path selection" that is recited in claim 29. Applicant discussed this re-evaluation feature in his specification and in his previous amendments, which remarks are again repeated and incorporated herein by this reference. Therefore, because the Examiner has disregarded this claim limitation, the rejection of claim 29 must be withdrawn for this reason as well.

Regarding Bae, Applicant has already explained in his previous responses why Bae does not establish a *prima facie* case of obviousness of Applicants's claims. Applicant's previous remarks are again repeated and incorporated herein by this reference. Specifically, the Examiner now states that "Bae teaches sending a alarm over the optical network in response to the data indicative of at least one of of the one or more environmental conditions." (Office Action, page 5, paragraph 6). This statement is still not correct as Applicant cannot find the word "environmental" in Bae and Bae discloses nothing about environmental conditions or weather. Moreover, it would not be obvious to a person of ordinary skill in the art to modify Bae's alarm to be sent in response to environmental condition data because this would destroy Bae's intended function and principle of operation as Applicant pointed out in his previous responses. Therefore, the rejections should be withdrawn.

The Examiner also asserts that it would have been obvious to send Bae's alarm over a free-space optical network "in

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order to eliminate the wire connection, reduce size, weight of device and make device is portable." (Office Action, page 5, paragraph 6). Applicant respectfully disagrees with this assertion. Specifically, the Examiner has not demonstrated a motivation or explained why a person of ordinary skill in the art would want to eliminate Bae's "wire connection". As Applicant pointed out in his previous responses Bae does not suggest anything about free-space optics or sending an alarm over a free-space network. In fact, the elimination of Bae's "wire connection" would change Bae's principle of operation, which means that a person of ordinary skill in the art would not make such a modification.

The Examiner also appears to assert that Bae's mention of "the duplication of paths" at column 5, line 46 would somehow motivate a person of ordinary skill in the art to send Bae's alarm over a free-space optical network, and then combine this modified version of Bae's system with Kumar et al.'s system. Applicant also disagrees with this assertion. Again, the Examiner has not shown an adequate motivation for sending Bae's alarm over a free-space optical network, and Bae's mention of "the duplication of paths" certainly does not suggest the use of free-space optics.

Therefore, Applicant submits that Bae combined with Kumar et al. or the '540 and '610 provisional applications does not establish a *prima facie* case of obviousness of Applicant's claims 13, 14 and 27-30 and that the rejections should be withdrawn.

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Fees Believed to be Due

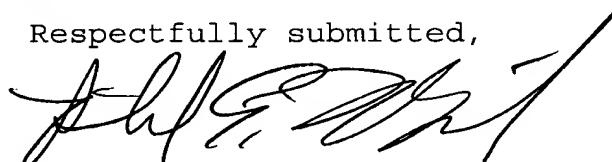
No extra claims fees are due.

A Fee Transmittal is enclosed herewith to cover the fee for the additional Supplemental IDS submitted herewith.

C O N C L U S I O N

In view of the above, Applicant submits that the pending claims are in condition for allowance. Should there remain any outstanding issues that require adverse action, it is respectfully requested that the Examiner telephone Richard E. Wawrzyniak at (858) 552-1311 so that such issues may be resolved as expeditiously as possible.

Respectfully submitted,



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